

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all previous versions, and listings, of claims in the application:

1. (Currently Amended): A method of collecting a biological fluid comprising:

collecting a biological fluid by natural flow, without a pump ~~wherein collecting comprises:~~

~~introducing a collection bag having a biological fluid collection device, wherein the biological fluid collection device of the collection bag is proximate to a biological fluid source and is in fluid communication with the collection bag; and~~

~~allowing the biological fluid to flow through the biological fluid collection device of the collection bag to the collection bag without the use of a pump;~~

measuring a fluid flow rate of the biological fluid; and

pumping anticoagulant and/or preservation solution from a reservoir to the collected biological fluid at a solution flow rate;

wherein:

measuring a fluid flow rate of the biological fluid comprises weighing the collected biological fluid, the pumped anticoagulant and/or preservation solution, and any anticoagulant and/or preservation solution remaining in the reservoir; and

the solution flow rate is adjusted while collecting the biological fluid based upon the measured fluid flow rate to preserve a selected ratio between the collected biological fluid and the anticoagulant and/or preservation solution.

2. (Currently Amended): The method of Claim 1, further comprising:

collecting the biological fluid in a collection bag; and

pumping the anticoagulant and/or preservation solution to the collection bag;

wherein the solution flow rate is adjusted while collecting the biological fluid based upon the measured fluid flow rate to preserve a selected ratio in the collection bag between the collected biological fluid and the anticoagulant and/or preservation solution.

3. (Original): The method of Claim 1, wherein the biological fluid comprises blood.

4. (Currently Amended): The method of Claim 1, wherein measuring a fluid flow rate of the biological fluid further comprises calculating the ~~a~~ variation in weight of the ~~fluid~~ collected biological fluid, the pumped anticoagulant and/or preservation solution, and any anticoagulant and/or preservation solution remaining in the reservoir.
5. (Original): The method of Claim 1, wherein pumping comprises:
 - pumping using a peristaltic pump having a variable rotation speed; and
 - adjusting the variable rotation speed to obtain the appropriate solution flow rate.
6. (Withdrawn): A collection machine comprising:
 - a fluid flow measurement device operable to measure a biological fluid flow rate;
 - a pump operable at a variable rotation speed to pump an anticoagulant and/or preservation solution at a solution flow rate;
 - wherein the variable rotation speed of the pump is slaved to the biological fluid flow rate.
7. (Withdrawn): The collection machine of Claim 6, further comprising a measuring device operable to measure the weight of a biological fluid collected and further operable to calculate the biological fluid flow rate based upon weight measurements.
8. (Withdrawn): The collection machine of Claim 6, further comprising a peristaltic pump.
9. (Withdrawn): A bag system comprising:
 - a biological fluid collection device;
 - a collection bag in fluid communication with the fluid collection device;
 - a solution bag containing anticoagulant and/or preservation solution in fluid communication with the collection bag;
 - a collection machine having:
 - a fluid flow measurement device operable to measure a biological fluid flow rate to the collection bag; and
 - a pump operable at a variable rotation speed to pump an anticoagulant and/or preservation solution from the solution bag to the collection bag at a solution flow rate;

wherein the variable rotation speed of the pump is slaved to the biological fluid flow rate; and

wherein the solution flow rate is adjusted to maintain a selected ratio of biological fluid and anticoagulant and/or preservation solution in the collection bag.

10. (Withdrawn): The system of Claim 9, wherein measurement of pressure within the system is not required to maintain the selected ratio of fluid and solution.

11. (Withdrawn): The system of Claim 9, further comprising a first tube operable to provide fluid communication between the collection device and the collection bag.

12. (Withdrawn): The system of Claim 11, further comprising a second tube operable to provide fluid communication between the solution bag and the collection bag.

13. (Withdrawn): The system of Claim 12, further comprising the a circuit opener disposed on the second tube near a connection between the second tube and the solution bag.

14. (Withdrawn): The system of Claim 12, further comprising a connector operable to connect the first tube and the second tube.

15. (Withdrawn): The system of Claim 12, wherein the first tube is connected to the collection device and the collection bag, and wherein the first tube has a length of at least 15 cm between the connection to the collection device and the connection to the collection bag.

16. (Withdrawn): The system of Claim 15, wherein the first tube has a length of at least 25 cm between the connection to the collection device and the connection to the collection bag.

17. (Withdrawn): The system of Claim 12, wherein the second tube is compressed by the pump in a compression region, and wherein the compression region has a hardness less than that of the first tube.

18. (New): The method of Claim 2, further comprising:

collecting the biological fluid with a collection device in fluid communication with the collection bag via a tube; and

detecting the presence of the biological fluid in the tube.

19. (New): The method of Claim 18, wherein detecting the presence of the biological fluid in the tube comprises optical or ultrasonic sensing.

20. (New): The method of Claim 2, further comprising collecting a sample of the biological fluid by natural flow, without a pump.